IN THE CLAIMS:

On page 11, line 1 please cancel "Patent claims" and substitute:

--**WE CLAIM AS OUR INVENTION**:-- therefor.

Claim 1 has been amended as follows:

1. (Currently amended) ~~Method~~ A method for vapor deposition of a substrate with a layer of a ~~spicular~~ needle-shaped x-ray luminophore with at least one alkali metal, ~~in which~~ comprising simultaneously vaporizing an alkali halogenide ~~phases are simultaneously vaporized~~ phase with an alkali halogenide, mixed in the vaporization phase and ~~vacuum-deposited~~ vacuum-depositing the vaporized material on the substrate.

Claim 2 has been amended as follows:

2. (Currently amended) ~~Method~~ A method according to claim 1, ~~characterized in that~~ comprising implementing the vapor deposition ~~is implemented~~ at temperatures between 50°C and 300°C and a pressure between 0.001 Pa and 3 Pa.

Claim 3 has been amended as follows:

3. (Currently amended) ~~Method~~ A method according to claim 1 ~~or 2, characterized in that~~ comprising implementing a temperature treatment of the luminophore layer ~~is implemented after~~ the vapor deposition and a cooling.

Claim 4 has been amended as follows:

4. (Currently amended) ~~Method~~ A method according to claim 3, ~~characterized in that~~ comprising implementing the temperature treatment after cooling ~~preferably ensues~~ at room temperature in the presence of water vapor.

Claim 5 has been amended as follows:

5. (Currently amended) ~~Method~~ A method according to claim 3 ~~or 4, characterized in that~~ comprising implementing the temperature treatment ~~ensues~~ in ~~the~~ a range from 100°C to 300°C.

Claim 6 has been amended as follows:

6. (Currently amended) ~~Method~~ A method according to ~~any of the claims~~ claim 3 ~~through 5, characterized in that~~ comprising implementing the temperature treatment ~~ensues~~ in a mixture of inert gas and water vapor.

Claim 7 has been amended as follows:

7. (Currently amended) ~~Method~~ A method according to ~~any of the claims~~ claim 3 ~~through 5, characterized in that~~ comprising implementing the temperature treatment ~~ensues~~ in humid air.

Claim 8 has been amended as follows:

8. (Currently amended) ~~Method~~ A method according to ~~any of the claims~~ claim 1 ~~through 7, characterized in that~~ comprising using $Cs_xEu_yBr_{(x+2y)}$ ~~is used~~ as ~~an~~ said alkali halogenide phase and using CsBr ~~is used~~ as ~~an~~ said alkali halogenide, ~~such that~~ to form an x-ray storage luminophore ~~of the general formula~~ CsBr : $Cs_xEu_yBr_{(x+2y)}$ ~~forms~~.

Claim 9 has been amended as follows:

9. (Currently amended) ~~Method~~ A method according to ~~any of the claims~~ claim 1 through 8~~, characterized in that~~ comprising simultaneously vaporizing a quantity x of the alkali halogenide phase and a quantity (600g –x) of the alkali halogenide ~~are mutually vaporized~~.

Claim 10 has been amended as follows:

10. (Currently amended) ~~Method~~ A method according to ~~any of the claims~~ claim 1 ~~through 9, characterized in that~~ comprising mixing the alkali halogenide phase and the alkali halogenide ~~are mixed~~ and ~~introduced~~ introducing the mixture into a vaporization ~~boat~~ vessel for vaporization thereof.

Claim 1 has been amended as follows:

11. (Currently amended) ~~Method~~ A method according ~~any of the claims~~ claim 1 ~~through 9, characterized in that~~ comprising separately introducing the alkali halogenide phase and the alkali halogenide ~~are~~

~~separately introduced~~ into ~~a plurality of~~ respective vaporization ~~boats~~ vessels and simultaneously vaporizing said alkali halogenide phase and said alkali halogenide in the respective vacuum vessels.

Claim 12 has been amended as follows:

12. (Currently amended) ~~Spicular~~ A needle-shaped x-ray luminophore with at least one alkali metal, produced according to the method according ~~to any of the claims~~ claim 1 ~~through 11 according to~~ having the ~~following~~ formula:

$$\left(\left(M'^{+}\,H'^{-}\right)_a\left(M''^{+}\,H''^{-}\right)_{(1-a)}\right)_k : \left(M'^{+}{}_x S^{z+}{}_y H'^{-}{}_x H'''^{-}{}_{z*y}\right)_b \left(M'^{+}{}_x S^{z+}{}_y H''^{-}{}_x H'''^{-}{}_{z*y}\right)_c$$
$$\left(M'^{+}{}_x S^{z+}{}_y H''^{-}{}_x H'''^{-}{}_{z*y}\right)_d \left(M''^{+}{}_x S^{z+}{}_y H'^{-}{}_x H'''^{-}{}_{z*y}\right)_e$$

~~whereby~~ wherein M^+ is at least one metal ion selected from the group consisting of Na, K, Rb and Cs, H^- is at least one halogenide selected from the group consisting of F, Cl, Br and I and S^{z+} is at least one lanthanide ion selected from the group consisting of La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb or Lu.

Claim 13 has been amended as follows:

13. (Currently amended) ~~X-ray~~ An x-ray luminophore according to claim 12, ~~characterized in that it is~~ comprising an x-ray storage luminophore ~~according to~~ having the ~~following~~ formula:

$$CsBr : Cs_xEu_yBr_{(x+2y)}.$$